

CLAIMS

1. A honeycomb filter for purifying exhaust gases which has a structure in which:
- 5 a plurality of a columnar porous ceramic member are combined with one another through adhesive layer, each of said columnar porous ceramic member comprising a number of through holes that are placed in parallel with one another in the length direction with partition wall interposed therebetween
- 10 such that
said partition wall which separates said through holes functions as a filter for collecting particulates
wherein
the relationship between a thermal expansion coefficient
- 15 α_L of said adhesive layer and a thermal expansion coefficient α_F of said porous ceramic member is as follows:
$$0.01 < |\alpha_L - \alpha_F| / \alpha_F < 1.0.$$
2. A honeycomb filter for purifying exhaust gases which has a structure in which:
- 20 a plurality of a columnar porous ceramic member are combined with one another through adhesive layer,
each of said columnar porous ceramic member comprising a number of through holes that are placed in parallel with one
- 25 another in the length direction
while partition wall interposed therebetween
such that
said partition wall which separates said through holes functions as a filter for collecting particulates
- 30 wherein
Young's modulus of said adhesive layer is set to 60% or less of Young's modulus of said porous ceramic member, and
the relationship between a thermal expansion coefficient
- 35 α_L of said adhesive layer and a thermal expansion coefficient α_F of said porous ceramic member is as follows:

$$0.01 < (\alpha_L - \alpha_F) / \alpha_F < 1.0.$$

3. The honeycomb filter for purifying exhaust gases according to claim 1 or 2, further comprising
- 5 a catalyst supported thereon.